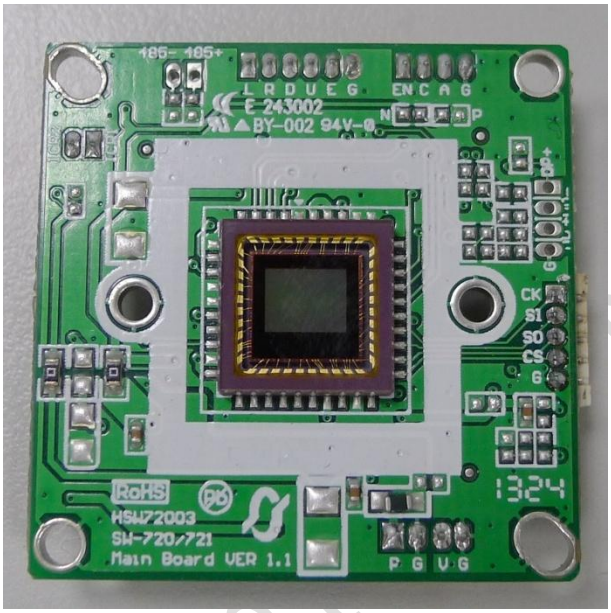
参考資料

SW-720_721 USER MANUAL



MODEL : SW-720 / 721
PCB Ver. : V1.1
HW RD : Jack(鄭亦翔)
WRITER : Usher(郭宗翰)

RELEASE	APPROVED	DESIGNER
2013/10/22		

History

Rev.	Released Date	Updated Information	Written by
1.0	9/23	User Manual Create	Usher
1.1	10/3	Mechanical Updated	Usher
1.2	10/22	Content Updated	Usher/Charon

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Specification

Model	SW-720		SW-721
Sensor	NTSC		PAL
	1/3 inch NTSC/PAL CMOS Image Sensor		
Power / Video Connector Type	4 pin / 1.25 mm		3 pin / 1.5 mm
Effective Picture Elements	728(H) X 488(V)		
Lens	Selectable / Default : 3.6mm, Compatibility: 6mm (F2.0) fixed lens / CS MONUT / VARI FOCAL 3.5~8 mm		
DAY/NIGHT (NOTE)	EXT MODE		
Auto Gain	Yes		
Gamma	0.45		
	MIN	TYP	MAX
PCB size	31.85 * 31.85 mm	32 * 32 mm	32.15 * 32.15 mm
Horizontal Resolution		600 TV lines	
Minimum Illumination (F2.0 Lens & Day type OLPF)		1.5 Lux	
Minimum Illumination (F2.0 Lens & Day & Night type OLPF)		0.3 Lux	
Electronic Shutter	1/60 (1/50)	Auto	1/100,000
ATW	3200K	Auto	10500K
S/N Ratio	52dB		
Video Output		Composite 1 Vp-p 75 Ohms	
Power	6V	12V	13.2V
Power Consumption	49mA(@13.2V)	52mA	98mA(@6V)
Operating Temperature	-10℃		50℃
Storage Temperature	-20℃		60℃
Operating Humidity			80% RH
Storage Humidity			90% RH

Note: The preset mode for DAY/NIGHT is EXT mode (default color mode)
When ext signal is less than 3V, the image is in color mode; when output signal is 3V, image is B/W
This mode can switch to AUTO mode by using OSD

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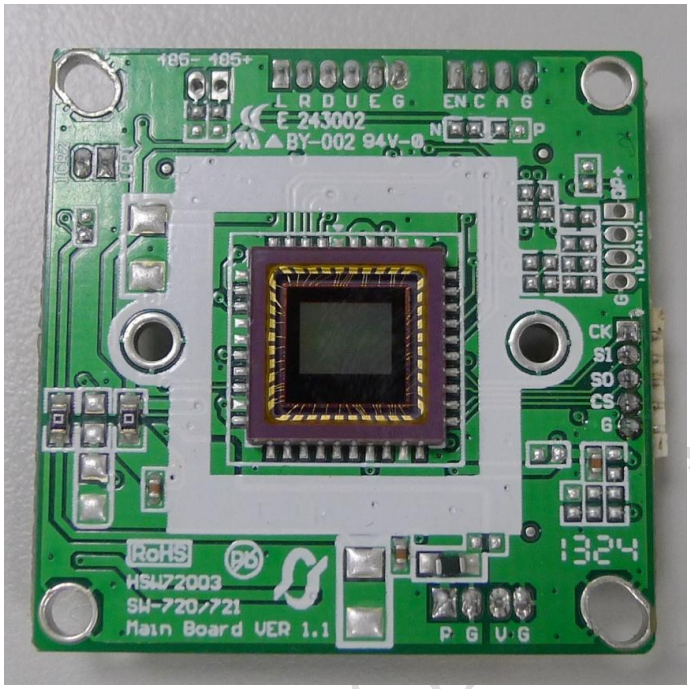
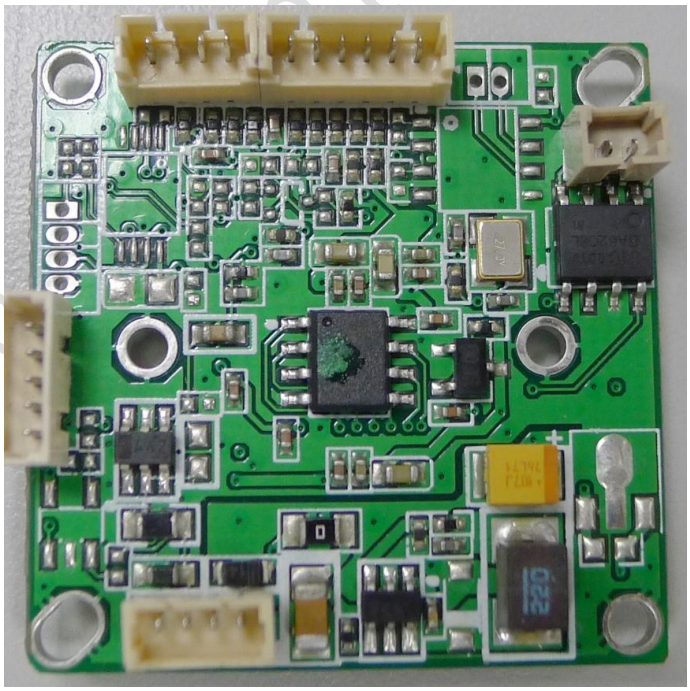
PCB Top View & Mechanical Drawing

TOP



Bottom



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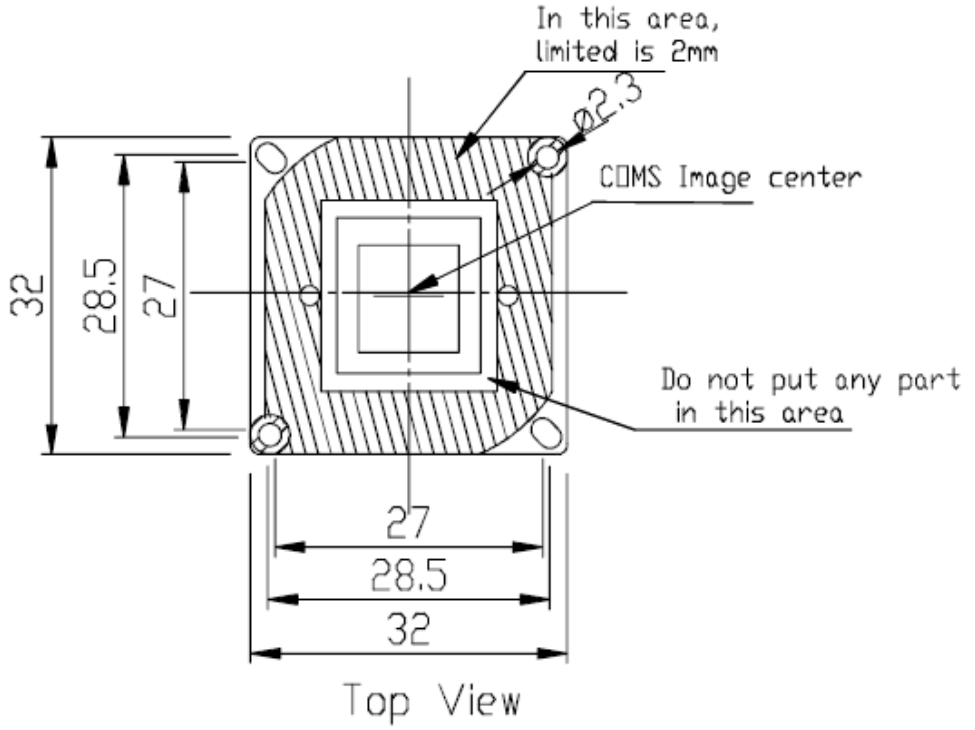
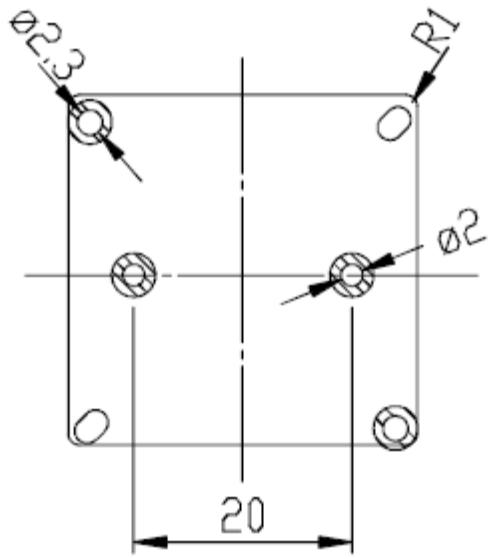
Mechanical drawing



Top View



Bottom View

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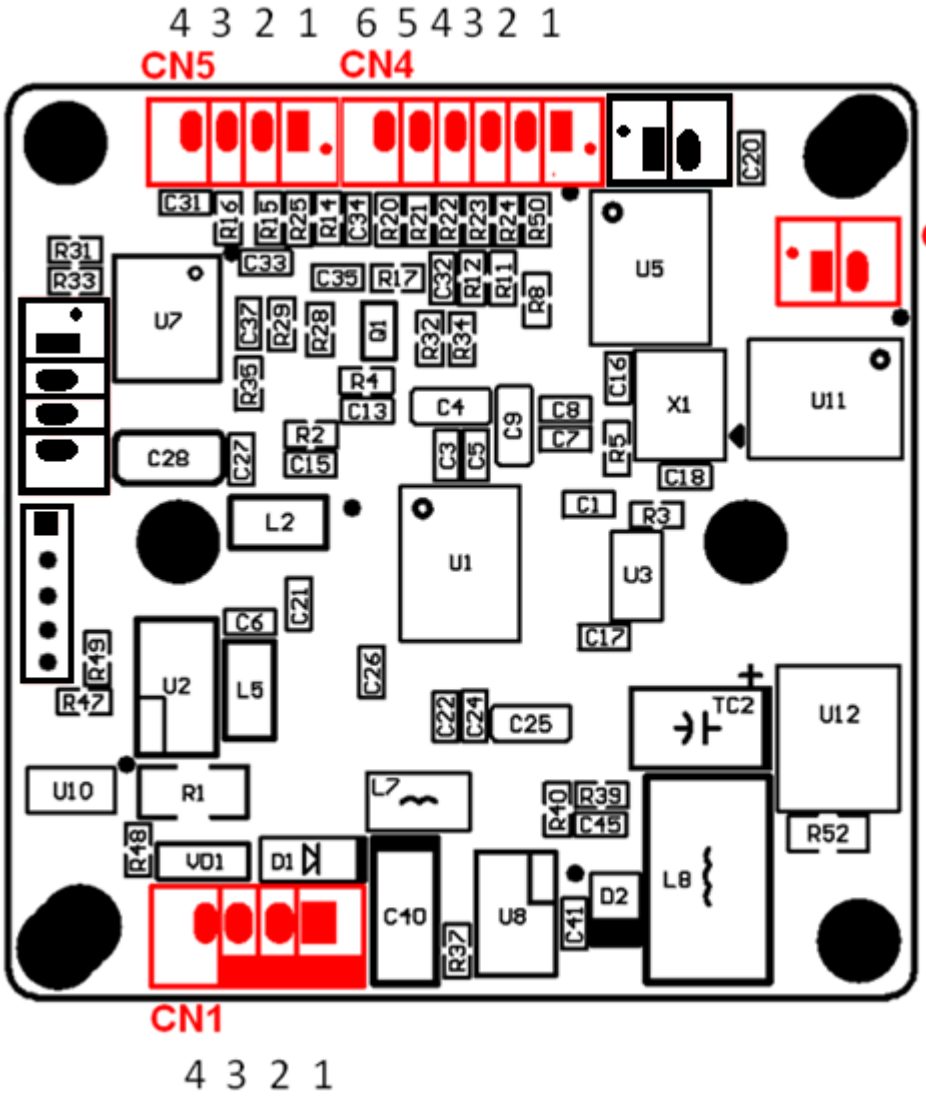
IO Port



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Connector	No	Pin Name	I/O	Description	Default Level
CN1 (3P/4P) *(POWER/ VIDEO)*	1	DC_12V	I	12V Input	-
	2	GND	G	Ground	-
	3	VIDEO	O	Video Output	-
	4	GND	G	Ground(Only 4P connector)	-
CN4 *(OSD)*	1	OSD_LEFT	I	OSD LEFT (Low act)	3V
	2	OSD_RIGHT	I	OSD RIGHT (Low act)	3V
	3	OSD_DOWN	I	OSD DOWN (Low act)	3V
	4	OSD_UP	I	OSD UP (Low act)	3V
	5	OSD_ENETER	I	OSD ENTER (Low act)	3V
	6	GND	G	OSD GROUND	-
CN5 *(GPIO)*	1	IR_LED_EN	O	D/N STAUTS OUTPUT 0V = COLOR MODE 3V = B/W MODE	0V
	2	EXT_CDS	I	Light Sensor Input Control 0~3V = COLOR MODE 3 ~6V= B/W MODE	0V
	3	M_ALARM	O	Motion Detect Pin Output 0V = NORMAL 3V = ALARM	0V
	4	GND	G	Ground	-
CN6 *(ICR)*	1	ICR_OUT1	B	ICR Control Signal 1	-
	2	ICR_OUT2	B	ICR Control Signal 2	-

Note:

1. The ICR control signal functions when systems switches between COLOR & BW Mode

2. When **SW-720 is at color mode**, ICR switches to **DAY OLPF mode**.
   When **SW-720 is at B/W mode**, ICR switches to **D/N OLPF mode**.

3. **DAY OLPF mode** => Only visible light can pass.
   D/N OLPF mode => All light include (IRLED) can pass.

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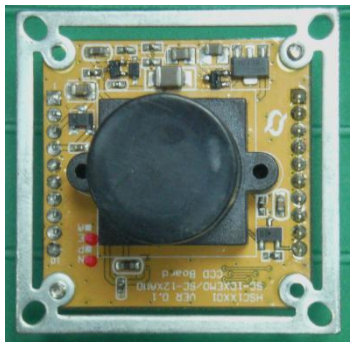
Q&A

Q1. How to effectively make Day & Night module into Day Module ?
Use Lens with IR Coating to block the Infrared light.

Q2. How to enlarge 32x32 size PCB to 38x38 size ?
Use 32 to 38 conversion frame.



Q3. Issue on blurred image or poor image resolution
Check if the surface of the sensor or the top & bottom side of the lens are contaminated, use micro-denier to clean all the contaminants if necessary.
Also it could be image out of focus, please adjust the focus of the lens.

Q4. Can not achieve the best focus
Change the height of the lens holder if focus can not be met.
Adjust the lens to make it closer to the sensor, if you still see the blurred image, please change a lower height lens holder.
Adjust the lens to make it far away from the sensor, if you still see the blurred image, please change a higher height lens holder.

Q5. Why the color I see on the TV seem not to be correct?
For some circumstances (light source include IR), the color of the object might be influenced by the IR.

Q6. How do I deal with color rolling?
Please select modules which has auto iris function and use direct drive type auto iris lens.

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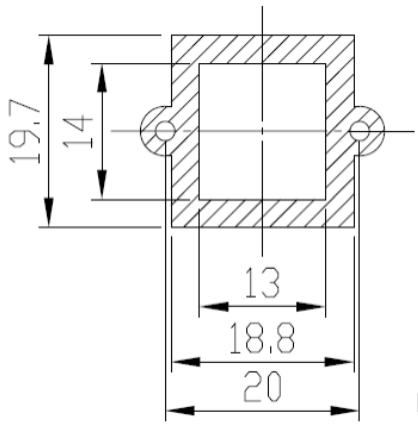
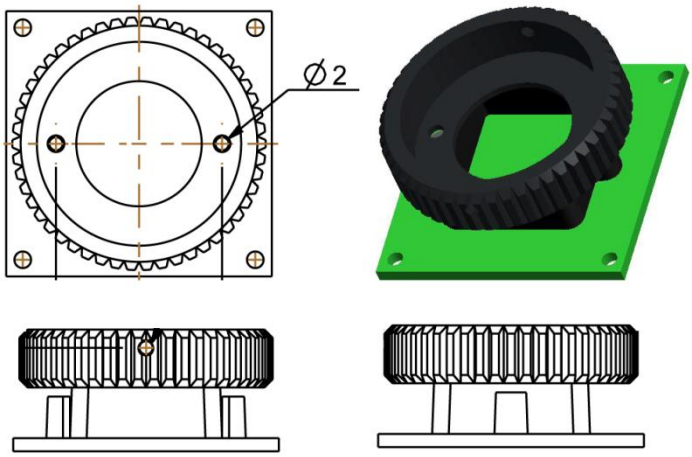
Q7. How do I select Lens Holder?

The lens holder screw hole spacing is 20mm. Please refer to the figure below for the holder size (inner & outer) (length 19.7~14mm: width 18.8~13mm)



Q8. If I want to use CS mount lens, what should I do?



Use CS mount lens holder, please refer to the follow figure.

Q9. The connection method for the power/video port?

Please refer to the "power/video port" section.

Q10. How to select IR LED?

Please use the IRLED with peak wavelength at around 850nm.

Q11. The effect of IRLED is not obvious?

(1) Your must use D/N type module (with D&N OLPF attached on the sensor)
(2 Your IRLED peak wavelength must be 850nm

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Q12. How to increase the visible distance when using IRLED at night?

(1) Increase the number of IRLED
(2) Use lens with larger iris (smaller F-number)

Q13. How to externally control the video D/N mode from color to mono when IRLED is switched ON?

Please select the module which has external D/N mode input port, for detail, please contact module distributors.

Q14. Suggestions on the PCB screws

We suggest you to use M2*4 Machine Screw or (phi)2*4 self-tapping screw.

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